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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/695,823

10/30/2003

Karine Marion

114120

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02/20/2008

OLIFF & BERRIDGE, PLC

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ALEXANDRIA, VA 22320-4850

EXAMINER

WARE, DEBORAH K

ART UNIT

PAPER NUMBER

1651

MAIL DATE

DELIVERY MODE

02/20/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/695,823

**Applicant(s)**

MARION, KARINE

**Examiner**

Deborah K. Ware

**Art Unit**

1651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-30 is/are pending in the application.
- 4a) Of the above claim(s) 11-22 and 30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-10 and 23-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Claims 1 and 3-30 are pending.

#### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 1, 2007, has been entered.

#### ***Priority***

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in France on October 31, 2002. It is noted that applicant has filed a certified copy of the 02.13963 application as required by 35 U.S.C. 119(b) on February 28, 2007. Further, the application claims priority benefit of 60/422,508 filed October 31, 2002.

#### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on December 23, 2004 was received. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

***Response to Amendment***

The amendment and extension of time therewith filed August 1, 2007, has been received and entered. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Election***

Applicant's election with traverse of Group I, claims 1, 3-10 and 23-29 in the reply filed on November 28, 2007, is acknowledged. The traversal is on the ground(s) that there is no serious burden. This is not found persuasive because as indicated by the separate classification of the separate and distinct claimed inventions there would be a serious burden of search. Thus, for these reasons and those of record the restriction requirement is maintained at this time, however, it is possible that the claims can be rejoined upon indication of allowable subject matter. Thus, even though, the examiner has required restriction between product and process claims. Where applicant elects claims directed to the product/process, and the product/process claims are *subsequently found allowable*, withdrawn process/product claims that depend from or otherwise require all the limitations of the allowable product/process claim will be considered for rejoinder. All claims directed to a nonelected process/product invention must require all the limitations of an allowable product/process claim for that process/product invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the process claims will be withdrawn, and the rejoined claims will be fully

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examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims of the elected subject matter are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn claims that are not commensurate in scope with an allowable claims will not be rejoined. See MPEP § 821.04(b).

Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the claims should be amended during prosecution to require the appropriate limitations in all of the claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

The requirement is still deemed proper and is therefore made FINAL.

Claims 11-22 and 30 are hereby withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention(s), there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on November 28, 2007.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-10 and 23-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 3-10 and 23-29 are rendered vague and indefinite for failing to recite clear and distinct process steps wherein it is unclear in step c) which solution, therefore, it is suggested to insert --from step a) and b)-- after "said solutions". Also claim 10 is rendered vague and indefinite for reciting "by citric acid" at line 2, wherein it is unclear what this means in the Markush Group. Perhaps "by" is a typo. Deletion of "by" is suggested. Furthermore, to be consistent with the changes of claim 1 it is suggested to change claim 29 to recite "circulation or recirculation" at line 3 in place of simply "or by recirculation" .

### ***Response to Arguments***

Applicant's arguments filed August 1, 2007, have been fully considered but they are not fully persuasive since these new rejections under the statute have been created by Applicants new amendments. Thus, this rejection is sustained for different reasons than previously addressed in the last office action.

### ***Claim Rejections - 35 USC § 102/103***

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting

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directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3-5 and 7-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Xu (US 6,777,223 having benefit of priority to June 19, 2000) or in the alternative obvious over Xu, disclosed on enclosed PTO-892 Form.

Claims are drawn to method of removing a biofilm.

Xu teaches method of removing a biofilm comprising carrying out by washing a surface to be treated with a) a solution comprising an enzyme mixture (see columns 7-9, lines 15-65) of proteases, esterases, lipases, galactosidase, and amylase, and b) applying an alkaline solution of detergent containing surfactant (see column 7, lines 15-25). Further, amino acids are disclosed to be present or prepared in response to enzymatic activity of the solution, note column 4, lines 20-30.

The claims are identical to the teachings of Xu and are considered to be anticipated by the teachings therein. Furthermore, in terms of the washing step, although the reference teaches contacting step, the presence of the detergent would inherently include washing to be a function of the disclosed contacting step. However,

in the alternative that there is some unidentified claim characteristic which is not disclosed then the difference is considered to be so slight as to render the claims obvious. It would have been obvious to provide for a different enzyme other than acylase because biofilms have different properties and to select from a list of disclosed enzymes by Xu would have been prima facie obvious to one of ordinary skill in the art. One of skill would have been motivated to select from the other disclosed enzymes as claimed herein, with the expectation of successful results.

### ***Response to Arguments***

Applicant's arguments filed August 1, 2007, have been fully considered but they are not persuasive. The argument that Xu would not have removed the acylase and carrier from the solution is noted, however, Xu clearly teaches that the enzyme selection is in accordance with the specific properties of the biofilm to be removed, note col. 7, lines 50-55. Thus, this clearly teaches that acylase would not necessarily be present if not so desired for the removal of a specific biofilm and to select from one or more of the other disclosed enzymes which are also claimed herein is inherent to the specific properties of the biofilm to be removed. The presence of water is an inherent feature because biofilms are typically located in aqueous environments. Xu does teach removing biofilms with other enzymes and to select for these enzyme would have been obvious to one of skill in the art because the disclosure teaches that biofilms have specific properties and the enzyme is selected is based on the properties of the biofilm in order to effects its removal. Thus, for these reasons and those of record the claims are alternatively prima facie obvious over the cited reference.



***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-10 and 23-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xu (US 6,777,223), in view of Barbeau et al (US 6,762,160) and Carpenter et al (US 5,238,843), and Cermenati et al (US 6,992, 053) all cited of record and reference on enclosed PTO-892 Form.

Claims are drawn to method of removing a biofilm, and are further drawn to an enzyme mixture which is pancreatin (a protease), a disinfectant (hypochlorite) and an acid for removing the deposits that is citric acid.

Xu teaches method of removing a biofilm comprising carrying out by washing a surface to be treated with a) a solution comprising an enzyme mixture (see columns 7-9, lines 15-65) of proteases (see also column 8, line 23), esterases (see column 7, line 44), lipases, galactosidase, and amylase (column 9, line 56), and b) applying an alkaline solution of detergent containing surfactant (see column 7, lines 15-25). Further, amino acids are disclosed to be present or prepared in response to enzymatic activity of the solution, note column 4, lines 20-30. Each of trypsin (see column 8, line 24), galactosidase (see column 7, line 45), ribonuclease (see column 7, line 48), lipase (see column 9, line 38), etc. are well known.

Claims differ from Xu in that pancreatin, alkali hypochlorites (sodium and potassium) and citric acid are not disclosed.

Barbeau et al teach citric acid (note column 7, line 57 and column 8, lines 58-63) and disinfectant (note column 8, lines 58-67 and column 9, line 1). Sodium hypochlorite is disclosed at column 4, lines 2-3.

Carpenter et al teach pancreatin to be useful enzyme for treating a surface that contain biofilms, note column 1, line 58 and column 16, line 34. Glycosidase is disclosed at column 1, line 23.

Cermenati et al teach method of treating surfaces with potassium hypochlorite, note column 5, lines 47-48. They also teach that citric acid is capable of exhibiting good limescale removing performance whilst exhibiting also good disinfecting properties, note column 4, lines 14-17 and lines 23-24.

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to combine the teachings of Xu, Barbeau et al, Carpenter et al and Cermenati et al, in order to provide a mixture for removing biofilms from a surface because each of pancreatin, hypochlorite and citric acid, as well as potassium hypochlorite, have all been used for the same purpose, and washing surfaces and removing biofilms, therefrom.

Solutions of surfactants, mixture of enzymes, and salt forming acids are all well known for the purpose of degrading or removing biofilms. Furthermore, additional additives such as disinfectants, and the like are well know to be added thereto as well. To combine these all for purpose of achieving an enhanced effect for removing a biofilm

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is clearly within the skill of an skilled artisan in the art and an obvious modification of the cited prior art.

Therefore, one of ordinary skill in the art would have expected successful results applying these solutions and mixture to a surface by washing the surface. Clearly one of skill would have been motivated to select citric acid, hypo-chlorite and pancreatin because each of them are well known for such purpose as indicated and taught in the cited prior art. In the absence of persuasive evidence to the contrary the claims are deemed prima facie obvious.

### ***Response to Arguments***

Applicant's arguments filed August 1, 2007, have been fully considered but they are not persuasive. For the reasons noted above and those of record the Applicants' argument that the combination of Barbeau, Carpenter and Cermenati in combination or alone do not remedy the Xu are not persuasive because the enzymes are clearly disclosed and the biofilm will require an effective enzyme to be removed as disclosed by Xu. The claims are rendered prima facie obvious.

### ***Conclusion***

All claims fail to be patentably distinguishable over the state of the art discussed above and cited on the previously enclosed PTO-892 and/or PTO-1449. Therefore, the claims are properly rejected.

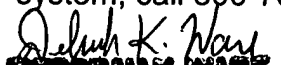
No claims are allowed.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah K. Ware whose telephone number is 571-272-0924. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
**DEBORAH K. WARE**  
**PATENT EXAMINER**  
Deborah K. Ware  
February 16, 2008